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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TRAN, CON P

ART UNIT

PAPER NUMBER

2614

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/784,190	Applicant(s) DURACH ET AL.	
	Examiner CON P. TRAN	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 9 and 10 are objected to because of the following informalities: Claims 9 and 10 are identical. For purpose of examining, examiner interprets Applicants intend to claim that Claim 10 depends from Claim 5.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-2, 4-6, and 8-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al. U.S. Patent 6,553,296 (hereinafter, "Breed' 296") in view of Breed et al. U.S. Patent 6,778,672 (hereinafter, "Breed' 672"), and further in view of Ohashi U.S. Patent 7,020,288.

Regarding **claim 1**, Breed' 296 teaches method for controlling an acoustic system in a vehicle (see Figs. 1A, 2A, 2B, and respective portions of the specification), in which the interior is monitored by an interior sensing system (transmitter/receiver 110, 114, Fig. 1A; col. 16, lines 10-45), at least the position of an occupant's head in the interior is recognized by an object recognition system from the data supplied by the interior sensing system (col. 18, lines 14-30), a setting of the acoustic system that is optimized for the occupant is performed automatically (noise cancellation, col. 27, lines 40-65; col. 40, lines 63-67) by a control unit as a function of seat occupancy (col. 39, lines 15-22; col. 40, lines 5-13) and the position of the occupant's head in the interior (col. 18, lines 14-30; col. 40, lines 45-65), and independent active sites (noise cancellation, col. 40, lines 44-50, lines 63-67) for passenger (child, passengers; see Figs. 1A, 2A, 2B; col. 30, lines 33-4).

However, Breed' 296 does not explicitly disclose independent active sites with separate sound from independent sound sources are made available to different occupants at the same time.

Breed' 672 discloses methods and arrangements for controlling audio reception by occupants of a vehicle in which the position of any occupants is determined and the sound generating components of the entertainment system controlled based on the determined position of any occupants (col. 1, lines 39-44); appropriate sound waves can be generated and transmitted to the occupant to cancel the unwanted noise and thereby optimize the comfort of the occupant, i.e., the reception of the desired sound from the entertainment system (280, Fig. 5; col. 20, lines 25-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made, those of ordinary skill in the art when facing a design need of providing independent active sites with separate sound from independent sound sources are made available to different occupants at the same time would have recognized and would have modified methods and arrangements for controlling audio reception by occupants of a vehicle taught by Breed' 672 with the method for controlling an acoustic system in a vehicle of Breed' 296 to obtain the independent active sites as claimed for purpose of controlling an entertainment system as desired by the occupants, as suggested by Breed' 672 in column 6, lines 21-23.

Breed' 296, as modified, further teaches wherein active noise suppression is performed by the control unit so that the active site of the noise suppression follows an instantaneous position of the occupant's head (using several beam, fastest tracking, col. 37, lines 59-67; noise cancellation, col. 40, lines 44-50, lines 63-67); and Breed' 296, as modified, further teaches to cancel the unwanted noise presence, i.e., interior, see col. 20, lines 25-34).

However, Breed' 296 in view of Breed' 672 does not explicitly disclose sounds from the exterior of the vehicle can be piped in from the exterior by the control unit through the acoustic system of the vehicle into the interior of the vehicle as part of the active noise suppression.

Ohashi discloses an active noise control in a vehicle (col. 1, lines 36-45) including active noise control (ANC) unit (2), source unit (1, e. g., radio, CD) speaker (4), sensor (4; col. 1, lines 27-37; see Figs. 1, 2, 4, 7, and respective portions of the

specification; see also Fig. 3, col. 3, lines 18-27). Ohashi further teaches sounds from the exterior of the vehicle can be piped in from the exterior by the control unit through the acoustic system (via outside sensor 76, Fig. 7) of the vehicle into the interior of the vehicle as part of the active noise suppression (col. 5, lines 14-22; see Fig. 6, col. 4, lines 35-50; col. 7, lines 3-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made, those of ordinary skill in the art when facing a design need of providing sounds being piped from the exterior by the control unit through the acoustic system of the vehicle into the interior of the vehicle as part of the active noise suppression would have recognized and would have implemented the active noise control in a vehicle taught by Ohashi with the method for controlling an acoustic system in a vehicle of Breed' 296 in view of Breed' 672 such that the acoustic system providing sounds from the exterior by the control unit through the acoustic system of the vehicle into the interior of the vehicle as part of the active noise suppression as claimed for purpose of reducing noises in the interior of a vehicle, as suggested by Ohashi in column 1, lines 5-6.

Regarding **claim 2**, Breed' 296 in view of Breed' 672 and further in view of Ohashi teaches method as claimed in claim 1. Breed' 296, as modified, further teaches wherein the optimized setting of the acoustic system is performed by the control unit as a function of the position of the head of at least one of a plurality of occupants (child, passengers; see Breed' 296, Figs. 1A, 2A, 2B; col. 30, lines 33-4).

Regarding **claims 5-6**, these claims have similar limitations as Claims 1-2. Therefore, they are interpreted and rejected for the same reasons.

Regarding **claim 4**, Breed' 296 in view of Breed' 672 and further in view of Ohashi teaches method as claimed in claim 2. Breed' 296, as modified, further teaches wherein active noise suppression is performed by the control unit so that the active site of the noise suppression follows an instantaneous position of at least one of the heads of the plurality of occupants (child, passengers, see Figs. 1A, 2A, 2B; col. 30, lines 33-4; using several beam, fastest tracking, col. 37, lines 59-67; noise cancellation, col. 40, lines 44-50, lines 63-67).

Regarding **claim 9**, Breed' 296 in view of Breed' 672 and further in view of Ohashi teaches method as claimed in claim 1. Ohashi, as modified, further teaches wherein the sounds from the exterior of the vehicle piped in from the exterior are introduced into the interior (via outside sensor 76, Fig. 7; col. 5, lines 14-22, also as noise reference input $x(n)$, Fig. 2, see col. 3, lines 1-5) of the vehicle through at least one speaker (as an error output of speaker 32, which is canceled out by echo-canceling filter 34, Fig. 3, see col. 3, lines 18-33, lines 40-44) of the acoustic system of the vehicle.

Regarding **claim 8**, this claim has similar limitations as Claim 4. Therefore, they are interpreted and rejected for the same reasons.

Regarding **claim 10**, this claim has similar limitations as Claim 9. Therefore, they are interpreted and rejected for the same reasons.

Response to Arguments

4. Applicants' arguments with respect to claims 1-2, 4-6, and 8-10 have been considered but are moot in view of the new ground of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CON P. TRAN whose telephone number is (571)272-7532. The examiner can normally be reached on M - F (08:30 AM - 05:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor VIVIAN C. CHIN can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/CPT/

January 13, 2009

/Vivian Chin/

Supervisory Patent Examiner, Art Unit 2614